

Attorney Docket: 622/40901CO
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: ROMAN SCHERTLER

Serial No.: 08/962,776 Group Art Unit: 3206

Filed: NOVEMBER 3, 1997 Examiner: K. NGUYEN

Title: A VACUUM PROCESS APPARATUS

AFTER-FINAL REPLY UNDER 37 CFR § 1.116
EXPEDITED HANDLING REQUESTED

Box AF

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action mailed on or about June 28, 2002, applicants hereby surrender original Letters Patent No. 5,245,736. An executed Third Supplemental Declaration was submitted on July 9, 2002 and acknowledged by the Examiner in the Advisory Action mailed on or about July 23, 2002.

All rejections are now deemed fully addressed; accordingly, favorable action and early allowance are requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

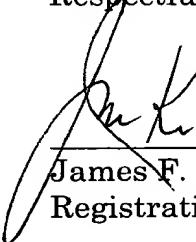
If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

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please charge any deficiency in fees or credit any overpayments to Deposit
Account No. 05-1323 (Docket #622/40901CO).

Respectfully submitted,

September 27, 2002


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The United States of America



The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

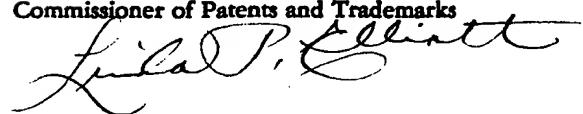
Therefore, this

United States Patent

Grants to the person or persons having title to this patent the right to exclude others from making, using or selling the invention throughout the United States of America for the term of seventeen years from the date of this patent, subject to the payment of maintenance fees as provided by law.

A handwritten signature in cursive script that appears to read "Bruce Lehman".

Commissioner of Patents and Trademarks

A handwritten signature in cursive script that appears to read "Lila P. Elliott".

Attest

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United States Patent [19]

Schertler

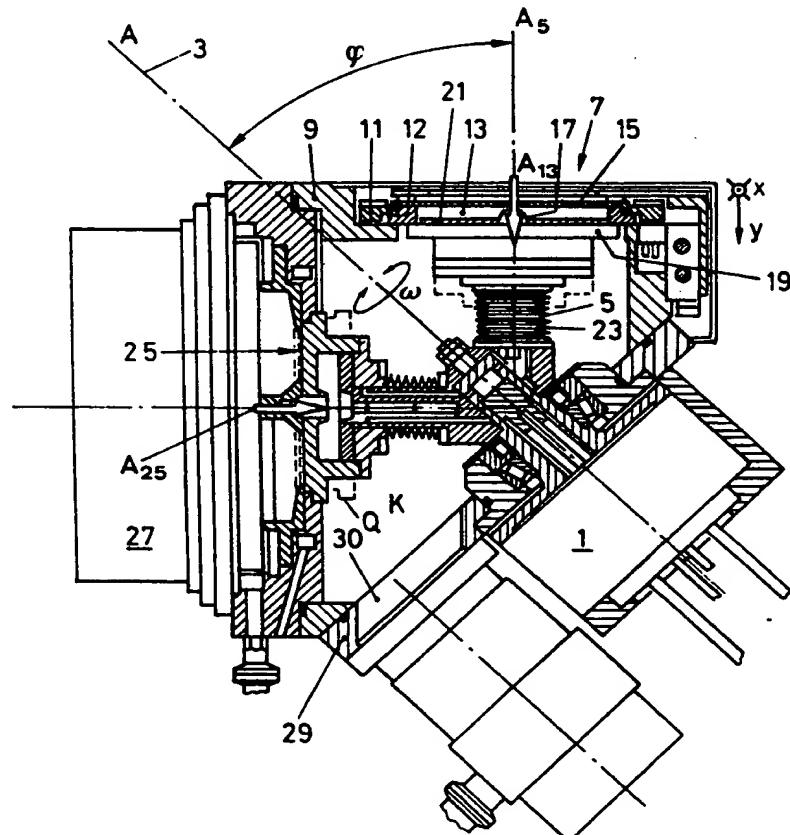
[11] Patent Number: 5,245,736
[45] Date of Patent: Sep. 21, 1993

[54] VACUUM PROCESS APPARATUS**[75] Inventor:** Roman Schertler, Wolfurt, Austria**[73] Assignee:** Balzers Aktiengesellschaft,
Liechtenstein, Liechtenstein**[21] Appl. No.:** 888,111**[22] Filed:** May 26, 1992**[30] Foreign Application Priority Data**

May 31, 1991 [DE] Fed. Rep. of Germany 4117969

[51] Int. Cl.: B23B 15/00; B25B 11/00**[52] U.S. Cl.:** 29/33 P; 29/563;
29/559; 269/21**[58] Field of Search:** 29/33 P, 563, 559;
269/21, 57, 61; 279/3**[56] References Cited****U.S. PATENT DOCUMENTS**3,915,117 10/1975 Schertler 118/719 X
4,652,135 3/1987 Ono 269/21 X**FOREIGN PATENT DOCUMENTS**0136562 2/1983 European Pat. Off. .
0161927 11/1985 European Pat. Off. .
0389820 3/1990 European Pat. Off. .0130144 6/1987 Japan 269/21
0973293 11/1982 U.S.S.R. 269/21**Primary Examiner—** Joseph M. Gorski**Assistant Examiner—** Khan V. Nguyen**Attorney, Agent, or Firm—** Evenson, McKeown,
Edwards & Lenahan**[57] ABSTRACT**

The invention proceeds from a vacuum process apparatus for an article which is processed or treated, resp. at two stations, whereby each station has a charging and/or removing opening for the article. A transporting device is supported for rotation and includes a supporting portion which is successively moved onto the openings of the stations. The process plant is designed in such a manner that the surface normals determined by the surfaces of the openings and the space axis defined by the axis of rotation of the transport device do not run parallel and rather enclose together an angle of 90° or 45°. By such an arrangement it is possible to design extremely compact vacuum vapor deposition apparatuses having a plurality of individual stations, whereby additionally short transporting distances are obtainable and the volumes to be conditioned can be minimized.

29 Claims, 5 Drawing Sheets

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